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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,400	06/20/2003	Shujun Luo	55525-8054.US00	5236
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PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			CHUNDURU, SURYAPRABHA	
			ART UNIT	PAPER NUMBER
			1637	

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,400

Applicant(s)

LUO ET AL.

Examiner

Suryaprabha Chunduru

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of Group I (claims 1-10) in the reply filed on April 13, 2006 acknowledged.

Status

2. Claims 1-10 are considered for examination. Claims 11-12 are cancelled by Amendment filed in response to restriction requirement.

Priority

3. This application filed on June 20, 2003 claims benefit of US provisional application 60/390,563 filed on 6/21/2002.

Information Disclosure Statement

4. The Information Disclosure Statement filed on February 23, 2004 has been entered and considered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

A person shall be entitled to a patent unless –

- A. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Albrecht (US 6,265,163).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Note: the patent discloses that the reference population is derived from cloned cells, which is interpreted as reference population having foreign DNA (see col. 2, line 46-48, col. 24, line 50-67, col. 25, line 1-67, col. 26, line 1-6, col. 15, line 30-59)..

Albrecht et al. teach a method of claim 1, 6, 8-9, for detecting foreign DNA (see col. 2, line 46-48, col. 24, line 50-67, col. 25, line 1-67, col. 26, line 1-6, col. 15, line 30-59). in a modified host genome (expressed genes) comprising (a) competitively hybridizing first and second populations of polynucleotide probes labeled with distinguishable fluorescent labels with a reference DNA population comprising DNA population, said reference DNA population comprising DNA sequences characteristic of said foreign DNA, wherein different DNA sequences are attached to separate solid phase supports in clonal subpopulations (see col.41, line 44-67, col. 42, line 43-55); (b & c) sorting the solid supports, according to the ration of first label to second label on the duplexed probes hybridized to each support and selecting solid phase supports having a ratio of fluorescent signals different from 1:1 (differential expression values) (see col. 42, line 45-67, col. 43, line 7-30, col. 44, line 1-25); and (e) identifying the attached sequences or hybridized probes on the selected solid phase supports by sequencing (see col. col. 42, line 62-64, col. 43, line 3-6).

With regard to claims 2-3, Albrecht et al. also teach said solid phase supports are microparticles and said sorting is by fluorescence activated cell sorter (FACS) (see col. 43, line 7-30, col. 44, line 1-25).

With regard to claim 4, Albrecht et al. teach that said identifying comprises sequencing at least a portion of said hybridized probes (see col. 43, line 3-6).

With regard to claim 5, 7 a method for preparing probe populations comprising restriction digestion of fragments from populations of DNA, ligating pairs of primers and amplifying said fragments col. 9, line 13-33, col. 14, line 43-54, col. 15, line 30-65). Accordingly Albrecht et al. anticipates the invention.

B. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Fu et al. (US 6,897,023)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Note: the patent discloses that the reference population is derived from a library of cells, which is interpreted as reference population having foreign DNA (see col. 50, line 37, col. 13, line 66-67, col. 14, line 1-9).

Fu et al. teach a method of claim 1, 6, 8-9, for detecting foreign DNA (see col. 50, line 37, col. 13, line 66-67, col. 14, line 1-9) in a modified host genome (expressed genes) comprising

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(a) competitively hybridizing first and second populations of polynucleotide probes labeled with distinguishable fluorescent labels with a reference DNA population comprising DNA population, said reference DNA population comprising DNA sequences characteristic of said foreign DNA, wherein different DNA sequences are attached to separate solid phase supports in clonal subpopulations (see col.41, line 44-67, col. 42, line 43-55); (b & c) sorting the solid supports, according to the ration of first label to second label on the duplexed probes hybridized to each support and selecting solid phase supports having a ratio of fluorescent signals different from 1:1 (differential expression values) (see col.49, line 29-67, col. 50, line 28-67, col. 51, line 1-4, line 28-55); and (e) identifying the attached sequences or hybridized probes on the selected solid phase supports by sequencing (see col. col. 52, line 42-45, col. 51, line 1-4, col. 24, line 24-62).

With regard to claims 2-3, Fu et al. also teach said solid phase supports are microparticles and said sorting is by fluorescence activated cell sorter (FACS) (see col. 50, line 44-47, col. 51, line 1-4).

With regard to claim 4, Fu et al. teach that said identifying comprises sequencing at least a portion of said hybridized probes (see col. 49, line 28-46).

With regard to claim 5, 7 a method for preparing probe populations comprising restriction digestion of fragments from populations of DNA, ligating pairs of primers and amplifying said fragments (see col.20, line 37-67, col. 21, line 1-67, col. 22, line 147).. Accordingly Fu et al. anticipates the invention.

C. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Brenner et al. (US5,604,097).

Brenner teaches a method of claim 1, 6, 8-9, for detecting foreign DNA (see col.2, line 39-43, col. 22, line 15-66) in a modified host genome comprising (a) competitively hybridizing first and second populations of polynucleotide probes labeled with distinguishable fluorescent labels with a reference DNA population comprising DNA population, said reference DNA population comprising DNA sequences characteristic of said foreign DNA, wherein different DNA sequences are attached to separate solid phase supports in clonal subpopulations (see col. 4, line 9-26); (b & c) sorting the solid supports, according to the ration of first label to second label on the duplexed probes hybridized to each support and selecting solid phase supports having a ratio of fluorescent signals different from 1:1 (differential expression values) (see col. 4, line 26-29); and (e) identifying the attached sequences or hybridized probes on the selected solid phase supports by sequencing (see col. 4, line 29-32).

With regard to claims 2-3, Brenner also teaches said solid phase supports are microparticles and said sorting is by fluorescence activated cell sorter (FACS) (see col. 12, line 40-63, col. 20, line 15-58).

With regard to claim 4, Brenner teaches that said identifying comprises sequencing at least a portion of said hybridized probes (see col. 21, line 12-67, col. 22, line 1-14).

With regard to claim 5, 7 Brenner teaches that method for preparing probe populations comprising restriction digestion of fragments from populations of DNA, ligating pairs of primers and amplifying said fragments (see col. 14, line 64-67, col. 15, line 1-67, col. 16, line 1-50). Accordingly Brenner anticipates the invention.

Non-Statutory Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

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improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

A. Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,265,163 ('163). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim not is patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claim 1 is generic to all that is recited in claims 1 and 9 of the patent '163. That is, the claims 1 and 9 of the patent '163 fall entirely within the scope of claim 1, or in other words, claim 1 is anticipated by the claims 1 and 9 of the patent '163, specifically the method steps (a) competitively hybridizing first and second populations of polynucleotide probes labeled with distinguishable fluorescent labels with a reference DNA population comprising DNA population, said reference DNA population comprising DNA sequences characteristic of said foreign DNA, wherein different DNA sequences are attached to separate solid phase supports in clonal subpopulations (b & c) sorting

the solid supports, according to the ratio of first label to second label on the duplexed probes hybridized to each support and selecting solid phase supports having a ratio of fluorescent signals different from 1:1 (differentially expressed values) and (e) identifying the attached sequences or hybridized probes on the selected solid phase supports by sequencing are within the scope of the instant claim 1. Further, claims 2-9 are generic to all that is recited in claims 2-8, 10-16 of the patent '163. Thus the instant claims encompass the claims in the patent ('163) and are related as genus and species, and are coextensive in scope.

The courts have stated that a genus is obvious in view of the teachings of a species. see Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); and *In re Gosteli*, 872 F.2d 1008, 10 USPQ2d 1614 (Fed.Cir. 1989). Therefore the instantly claimed method is obvious over the claims in the patent. Thus the instant claims are rejected under obviousness-type of double patenting.

B. Claims 1-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,897,023 ('023). An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim not is patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed.Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed.Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claim 1 is generic to all that is recited in claims 1 and 18 of the patent '023. That is, the claims 1 and 18 of the patent '023 fall entirely within

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the scope of claim 1, or in other words, claim 1 is anticipated by the claims 1 and 18 of the patent '023, specifically the method steps (a) competitively hybridizing first and second populations of polynucleotide probes labeled with distinguishable fluorescent labels with a reference DNA population comprising DNA population, said reference DNA population comprising DNA sequences characteristic of said foreign DNA, wherein different DNA sequences are attached to separate solid phase supports in clonal subpopulations (b & c) sorting the solid supports, according to the ration of first label to second label on the duplexed probes hybridized to each support and selecting solid phase supports having a ratio of fluorescent signals different from 1:1 (differentially expressed values) and (e) identifying the attached sequences or hybridized probes on the selected solid phase supports by sequencing are within the scope of the instant claim 1. Further, claims 2-9 are generic to all that is recited in claims 1-17, 19-20 of the patent '023. Thus the instant claims encompass the claims in the patent ('023) and are related as genus and species, and are coextensive in scope.

The courts have stated that a genus is obvious in view of the teachings of a species. see Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); and In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed.Cir. 1989). Therefore the instantly claimed method is obvious over the claims in the patent. Thus the instant claims are rejected under obviousness-type of double patenting.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brenner (US 5,604,097) in view of Michiels et al. (WO 96/26283)..

Brenner teach a method for identifying a foreign DNA in a modified host genome as discussed above in section 5C.

However, Brenner did not specifically teach use of plant cell lines as transgene host organism.

Michiels et al teach a method for identifying foreign DNA in plant genome and differential expression of said foreign genome (see page 5, line 15-30page 6, line 1-9).

It would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of identifying foreign DNA as taught by Brenner with a step of including plant cell host organism as taught by Michiels et al. for the purpose of developing an improved method for identifying trans gene in a plant cell. One skilled in the art would have been motivated to combine the method as taught by Brenner with the inclusion of plant cells as taught by Michiels et al. because the ordinary artisan would have a reasonable

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expectation of success that inclusion of plant cells would result in developing a method for generating hybrid cultivar with superior performance as compared to their parents (see page 1, line 11-16) and such modification of the method is considered as obvious over cited prior art.

Conclusion

No claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M , Mon - Friday,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Suryaprabha Chunduru
Examiner
Art Unit 1637


SURYAPRABHA CHUNDURU 5/30/06
PATENT EXAMINER